923 Teal Drive
Benicia, California 94510
866 434 1772
Contact@KwikBondPolymers.com

PRODUCT DATA SHEET: KBP 204 P SEAL

KBP 204 P SEAL is a high molecular weight methacrylate (HMWM) monomer composition that has been developed as a *"healer/sealer"* penetrant for re-bonding and sealing shrinkage or other cracking, and filling pore structure in concrete.

KBP 204 is a *"100% reactive"*, low viscosity penetrant, that wicks deep into the cracks and pores of the concrete and then polymerizes to form a tough plastic seal. The result is a re-bonded crack that resists the ingress of moisture and chlorides by eliminating the direct pathway of the cracks. KBP 204 P SEAL is designed to penetrate quickly and allow return to service within 2 hours.

KBP 204 P SEAL is a low cost, effective solution that provides a tremendous amount of benefit.

SPECIAL FEATURES

- Simple to apply
- Fast curing properties
- Very low viscosity for rapid surface penetration
- Reduced mixing and handling hazard compared to other HMWM options
- Excellent adhesion to concrete even under damp conditions
- Low overall odor

PHYSICAL PROPERTIES	
Viscosity (ASTM D2196)	< 25 cps
Specific Gravity (ASTM D1475)	> 0.90
Flash Point (ASTM D3278)	> 180 °F
Tack Free Time (ASTM D1640)	< 400 minutes
Vapor Pressure, mm Hg (ASTM D323)	< 1 mm Hg
Volatile Content (ASTM D2369)	< 30%
Surface Coverage Rate*	60-125sf/gal

* Coverage rates for penetrants like KBP 204 P SEAL represent averages only. Field variables such as surface porosity, grooving, tining, heavy brooming, wide cracks, etc consume proportionately higher amounts of materials.

SEALER APPLICATION

Surface Preparation: For optimal penetration of material, steel shotblasting, sandblasting or other cleaning processes are required to provide a surface that will readily absorb the KBP 204 P SEAL materials. After cleaning the surface, and prior to mixing material, blow the deck surface clean using oil-free compressed air.

Mixing: KBP 204 P SEAL

1. Premix the entire container of KBP 204 P SEAL to ensure that material is well mixed before portioning out material to be mixed.
2. For 4 gallons of KBP 204 P SEAL, add 12 oz Cumyne Hydro Peroxide (also known as CHP, or Trigonox K90) and mix well.
3. Add 0 to 16 oz of Z Cure Accelerator and mix well. Use the temperature chart below as guidance and adjust based on field conditions.

We provide PSeal as a pre-promoted material to eliminate the hazard of the 8020 promotor and the CHP causing a flash fire. Unfortunately, some specifications still require a 3-component mix. If this is the case for your project and 8020 promotor has been supplied separately, first add 24oz of 8020 promotor to the 4 gallon pail of KBP 204, mix well and proceed with all other mixing instructions. DO NOT MIX 8020 and CHP together on their own or a flash fire may occur.

Z Cure Temperature Chart	
40-55°F	16 oz
56-65°F	8 oz
66-75°F	4 oz
77-90°F	0 – 4 oz

NOTE: Modifications may be required for working under different temperature conditions, nighttime application, and strength gain requirements. For temperatures above 90ºF, nighttime application should be considered. Elevated temperatures and UV light significantly increases the reactivity of KBP 204 P SEAL and reduces work time. Cold temperatures, humidity and fog greatly retard the surface cure of the KBP 204 P SEAL. Field adjustment of accelerators will be required to obtain the proper surface cure within the traffic closure windows. A demonstration using different levels of accelerator and/or catalyst under anticipated job conditions should be conducted prior to actual construction to determine the correct accelerator/catalyst variables. Typically, traffic may be returned in 1.5-3 hours. **Contact Kwik Bond Polymers technical department for recommendations and suggestions**.

Placement: KBP 204 P SEAL

After proper proportioning and mixing, distribute the KBP 204 P SEAL mixture on the concrete surface immediately. Leaving the material in the bucket will cause it to generate heat and begin to cure, making it unusable. Spread sealer at a rate of 60-125 square feet per gallon, consistent with the project specifications (other application rates are acceptable). Use a squeegee, roller, broom, etc. to distribute the material uniformly. Some areas may selectively absorb greater amounts of KBP 204 P SEAL and create dry spots. These areas should receive additional amounts of KBP 204 P SEAL to fill the pores and cracks to the point of refusal. Approximately 10 minutes after distribution, excess liquid sealer puddles may be redistributed to produce a more uniform saturation.

Once the KBP 204 P SEAL mixture has been distributed properly and approximately 10 to 20 minutes after initial placement, broadcast a commercial grade of dry sand. The intent of broadcasting sand is to provide initial traction to the treated surface. Commonly available heavy grades of sand blast sand, No. 8, 8 x 12, 8 x 20, and similar have been used successfully. The application rate of the broadcast sand is approximately 2 lbs/yd^2 (50lb bag = 225sf). Sand is most commonly placed by hand throwing. Significant quantities of excess loose sand should be removed from the deck prior to opening to traffic.

For nighttime, cool, damp, and foggy conditions, sealer cure speeds will be reduced, and a thin, oily residue may remain on the surface. The residue may alter skid resistance properties of the treated surface even though the surface traction sand has been applied and is well bonded. This residual oiliness can be resolved by distributing diatomaceous earth at approximately 5 lb/100 sf of surface area and then mechanically sweeping the area.

CLEAN UP

Wipe off excess materials with disposable shop towels or rags. Solvents like MEK, acetone, lacquer thinner, and orange cleaner are excellent cleaner is if used before the KBP 204 P SEAL hardens. Read and follow the safety and handling recommendations for these materials.

STANDARD PACKAGING

- KBP 204 P SEAL: 4-gallon pails, 50-gallon drums, 250-gallon Totes
- Cumyne Hydro Peroxide: 12 oz, 1-gallon containers
- Z Cure: 12 oz, 1- gal pails, 5-gal pails

STORAGE

KBP 204 P SEAL, CHP, and Z Cure should be stored in a COOL, DRY location and in their original containers at temperatures less than 80 °F. Containers need to remain tightly sealed to prevent contamination. The shelf life for these materials is 12 months. When stored at elevated temperatures, the KBP 204 P SEAL reactive monomer may gel prematurely. CHP can have reduced activity after a lengthy storage period. Retest all component materials as needed prior to use on a project. Prolonged storage may require material to be mixed before using or testing. Store all bagged aggregates in a clean, dry location away from moisture. Aggregates must be completely protected from any moisture.

SAFETY

Workers should wear appropriate protective clothing, gloves, and eye protection. For most outdoor applications, the use of a respirator is not required by OSHA. However, sensitive individuals may desire to wear an organic vapor respirator due to the chemical odors. Additional safety equipment includes a fire extinguisher, eye wash, and plenty of fresh water for other contact with skin. Workers should have a change of clothing in case of accidental contamination of clothing.

KBP 204 P SEAL components have a very low order of dermal toxicity. However, continued prolonged contact with the skin, especially catalyzed material, may lead to redness, swelling, blisters, or other effects. Sensitive workers may react much more rapidly. These effects are typical of other commonly used construction chemicals. All efforts should be made to prevent contact. Read MSDS sheets for additional information and first aid procedures.